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NEW SOUTH AMERICAN SYRPHIDAE (DIPTERA)

By C. L. FLUKE, JR.

The following new species, with the exception of two, are from Nova Teutonia (27° 11′ Lat., 52° 23′ Long.) in southern Brazil and were collected by Fritz Plaumann. The other two were taken, one in Ecuador, and one in Peru. The types are deposited in The American Museum of Natural History. Paratypes, where available, are deposited in the author's collection. Considerable aid has been given freely by Dr. C. H. Curran in identification of the many specimens received from South America and other localities, and I wish to thank him for his help.

TRICHOPSOMYIA WILLISTON

WILLISTON, S. W. 1888, Trans. Amer. Ent. Soc., XV, p. 259.
Halictomyia, SHANNON, R. C. 1927, Proc. U. S. Nat. Mus., LXX, Art. 9, p. 13.

Small, mostly shining black species with irregularly pilose eyes; antennae elongate; legs long pilose, the hind femora and tibiae inflated, the basal joints of the four front tarsi whitish in color.

This is an interesting genus which has been well characterized by Williston. Shannon has described a species from Bolivia which appears to be related to *polita* Williston. I am indebted to Dr. C. H. Curran for aid in the preparation of the following key. Shannon's species was not available so is not included.

TABLE OF SPECIES

1.—Second abdominal segment with a pair of oblique yellow spots...*currani*, n. sp.
Abdomen without yellow spots....2.
2.—Pile of eyes divided into upper and lower patches by a transverse bare stripe..3.
Eyes irregularly pilose, sometimes with five or six patches....5.
3.—Tibiae never in part clear yellow, antennae much longer than the face.
longicornis Williston.
Anterior four tibiae very broadly yellow basally; antennae not, or only a little, longer than the face....4.
4.—Scutellum pale pilose, at most a few marginal hairs black....*polita* Williston.
Scutellum mostly black pilose....*lasiotibialis*, n. sp.
5.—Pile of eyes with a continuous horizontal bare stripe across the middle; scutellum of female nearly entirely black pilose....*granditibialis*, n. sp.

Transverse bare median stripe interrupted inwardly by a vertical band or spot of dense pile.....6.

6.—Inner band of pile on the eyes continuous; female without large tubercles on the front.....*puella* Williston.

Inner band broken up into three spots; front of female with a large, prominent tubercle on each side above.....*tuberculata* Williston.

Trichopsomyia currani, new species

Figure 1

Characterized readily by the presence of a pair of oblique yellow spots on the second tergite. Length, 8 mm.

FEMALE.—Head entirely shining blue-black, pile of face and front yellow and peculiarly flattened or curled, a few scattered black hairs on the front, more just in front of the posterior ocelli, ocular edges of the face very narrowly silvery pollinose, this streak broadens out below onto the face and is very narrowly interrupted opposite the antennae; in addition there is a small triangular spot on each side of the front about halfway between the antennae and ocelli. Facial tubercle inconspicuous. Occiput swollen and shining above, covered with silvery pollen below; occipital pile yellow. Antennae as long as the face, brownish in color with indefinite light brown color toward the bases of the segments; arista as long as third segment, yellow at the base, black at tip. Eyes heavily covered with brownish to black hair with a nearly bare horizontal stripe about the middle; this stripe is broadest at the middle and contains a few scattered hairs; along the occipital margin the hairs are also mostly absent, those present being shorter.

Thorax shining, the mesonotum and scutellum with a bronze cast; the pile short and yellowish brown, a few longer black hairs on the edges of the scutellum.

Legs shining black, front four femora reddish at the tips, the tibiae yellowish to reddish, darker at the middle, the basal two segments of the tarsi whitish; hind legs very narrowly reddish at the knees, the basitarsi at the apex and the next two segments white. Pile of the legs long, pale, and ciliate, black on the apex of the posterior tibiae and base of the posterior basitarsi; hind femora inflated, hind tibiae very little swollen.

Wings hyaline, the stigma yellowish to brownish. Squamae light brown, halteres yellow, plumule white.

Abdomen shining aeneous with a pair of conspicuous oblique yellow spots on the second tergite, posterior margins of the second and third tergites opaque; pile inconspicuous, pale in color.

TYPES.—Holotype, female, Nova Teutonia, Brazil, Nov. 21, 1936 (Fritz Plaumann). Paratypes: three females same place, Oct. 20, Nov. 14, and Nov. 21, 1936.

Trichopsomyia lasiotibialis, new species

Figures 2 and 3

An elongate species, antennae shorter than the face, pile of the mesonotum golden, of the scutellum mostly black. Length, 6 and 10 mm.

MALE.—Face shining with yellowish bent pile, a few black hairs near the eyes and on the cheeks next to the oral margin. Front shining with a large triangular opaque brownish black pollinose area on the upper third, the pile black with the

center hairs yellowish and bent. Ocellar hairs black and there is a very small opaque spot just posterior to the anterior ocellus. Occipital pile immediately adjacent to the ocellar triangle yellowish but black on the sides about a third of the way down. Antennae shorter than the face; brownish, more yellowish at the bases of the segments; basal half of arista yellowish. Eyes hairy with the bare stripe uninterrupted, the eyes behind and above also bare.

Thorax black, the mesonotum with a bronze pollinose cast, the pile rather long and golden, black anteriorly, especially near the humeri; pile on the upper pteropleura and mesopleura black. Scutellum semi-opaque black, shining at the tip; pile black, a few yellow hairs intermixed. Disc of scutellum with a shallow, almost circular depression.

Legs very similar to *currani* in color; the hind femora slightly club-shaped, being more inflated toward the tip than toward the base; the tibiae more slender than the femora. Pile of the femora mostly black, white at the base of the hind femora.

Wings hyaline, darker across the middle, especially near the stigma which is brownish. Squamae and halteres blackish, the plumule light brown.

Abdomen semi-opaque black with shining bronze side spots on the third and fourth tergites, the second tergite has a bluish cast in certain lights. The pile is golden with shorter black hairs at the apices of the tergites.

TYPES.—Holotype, male, Nova Teutonia, Brazil, Nov. 13, 1936 (Fritz Plaumann); paratype, male, same place, Feb. 25, 1937.

I have hesitated to describe this species as new but have been unable to connect it with any of the described species. It appears nearest to *currani* but lacks the yellow spots on the abdomen, and the eye patches are different. It does not seem to be any of the species in which the males are known.

Trichopsomyia granditibialis, new species

Figures 4 and 5

A dark oval species; pile of the eyes patchy, the transverse stripe continuous; antennae longer than the face; scutellar and mesonotal pile mostly black; tibiae black; wings brown basally. Length, 9 mm.

FEMALE.—Head shining black. Face with whitish bent pile, the median line bare of hairs; the silvery pollinose stripes along the eyes similar to *currani;* pile next to the oral margin on the cheeks black in some specimens. Front smooth, depressed slightly at the side dust spots, pile white and bent in the middle; longer, straight, and black along the sides and around the ocellar triangle which is very prominent. The occipit is bare of pollen above, whitish pollinose below, the pile all yellowish. Eyes with an uninterrupted bare transverse stripe, in addition there is a bare stripe leading up from the transverse area and a bare patch below. Antennae longer than the face, first segment twice as long as the second; arista black, yellow on the basal fourth.

Thorax shining black, the pile black with white hairs intermixed on the anterior third of the mesonotum and a few in front of the scutellum, a rather prominent patch of white hairs on the mesopleura and partly on the upper sternopleura; most of the pile of the scutellum is black but a few white hairs are occasionally present along the sides and basally.

Legs shining black, the knees only briefly reddish, tarsal segments whitish as in *currani;* pile long and all black except on the white areas. The hind tibiae dilated, much larger than the femora.

Wings dark brown basally, especially near the stigma, more hyaline apically. Squamae brownish, plumule light brown, halteres yellowish with whitish knobs.

Abdomen shining dark reddish, the discs of the segments darker than the sides. The pile is short, mostly golden basally and along the sides, other areas black.

MALE.—Frontal triangle with the characteristic opaque spot in the orbital corner. Mesonotum with a broad, median, semiopaque, crossband. Abdomen black, mostly shining, partly opaque on the disc of the second and third tergites.

TYPES.—Holotype, female, Nova Teutonia, Brazil, Oct. 25, 1936 (Fritz Plaumann); allotype, male, same place, Feb. 19, 1937. Paratypes: two females, same data as the holotype.

This is the largest *Trichopsomyia* described and is broader than the other known species. It is closest to *puella* Williston but can be told from that species by its dark reddish abdomen (female) and continuous uninterrupted bare stripe of the eyes.

Epistrophe biarcuata, new species

Figure 6

Disc of the abdomen opaque black, with five arcuated transverse bands, the first, second and fourth interrupted into spots. Wings brownish. Length, 9 to 11 mm.

Captions for Figs. 1 to 15

All of the drawings except figure 7 were made with the aid of the camera lucida, but they are not all drawn to the same scale.

Fig. 1. *Trichopsomyia currani*, n. sp., abdominal pattern of female.

Fig. 2. *Trichopsomyia lasiotibialis*, n. sp., profile of head of male to show bare spots on the eye.

Fig. 3. *Trichopsomyia lasiotibialis*, n. sp., inner view of antenna.

Fig. 4. *Trichopsomyia granditibialis*, n. sp., femora and tibia of hind leg of female.

Fig. 5. *Trichopsomyia granditibialis*, n. sp., inner view of antenna.

Fig. 6. *Epistrophe biarcuata*, n. sp., abdominal pattern of male.

Fig. 7. *Xanthandrus flavomaculatus* Shannon, abdominal pattern of male (a free hand sketch of type).

Fig. 8. *Xanthandrus nitidulus*, n. sp., abdominal pattern of male.

Fig. 9. *Xanthandrus plaumanni*, n. sp., abdominal pattern of female.

Fig. 10. *Rhysops currani*, n. sp., abdominal pattern of male.

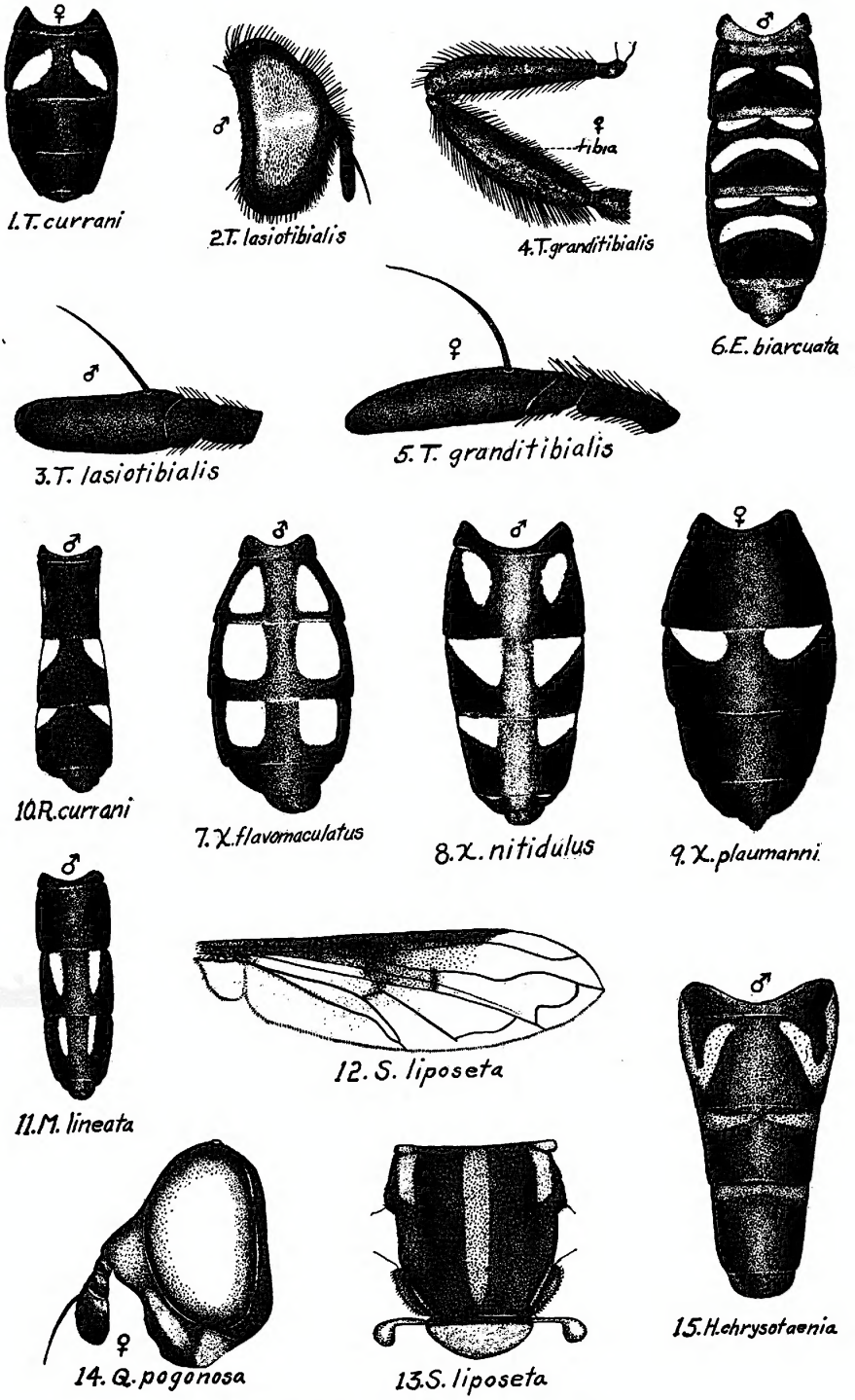
Fig. 11. *Melanostoma lineata*, n. sp., abdominal pattern of male.

Fig. 12. *Salpingogaster liposeta*, n. sp., wing of female.

Fig. 13. *Salpingogaster liposeta*, n. sp., mesonotum.

Fig. 14. *Quichuana pogonosa*, n. sp., profile of head of female.

Fig. 15. *Habromyia chrysotaenia*, n. sp., abdominal pattern of male.



(See opposite page for captions.)

MALE.—Head black, the yellow of the face diffuse and confined narrowly to the sides, somewhat broader below; the median black stripe very broad and shining; yellow areas and cheeks lightly whitish pollinose, with a dash just below the antennae; pile of face black, of the cheeks whitish. Facial tubercle prominent, broad and almost nose-shaped. Frontal triangle aeneous, shining and rough just above the antennae, rest of front thinly brownish pollinose, which becomes thicker and light brown in color along the orbits, pile all black. Ocellar triangle opaque black, pile black. Occiput very narrow above with black cilia; below gray pollinose with whitish pile. Antennae brown, third segment yellow below; arista brown.

Thorax aeneous, almost dull, the mesonotum with two widely separated narrow opaque black vittae. Pile of the mesonotum yellowish brown, the tips of the hairs black on the anterior half. Scutellum black with a dull ochreous cast; shining bluish on the sides; pile black, ventral fringe brownish. Notopleura, mesopleura, upper half of the sternopleura and pteropleura brownish pollinose; pile yellowish to brownish, black on the pteropleura. Metasternum thinly hairy.

Legs black; four front femora apically, the four front tibiae basally and the hind knees yellowish brown; pile black.

Wings entirely brownish, darker brown anteriorly. Squamae light brownish yellow, the upper fold black at the base; halteres yellow.

Abdomen opaque black; the first and fifth tergites and bases, sides and apices of the other tergites shining. Second tergite with two median, elongate, slightly arcuate, oblique yellow spots, which are widely separated and do not reach the sides. Third and fourth tergites each with a pair of basal, widely separated, yellow spots and an arcuated band, convex anteriorly, concave posteriorly, none of which reach the sides. Pile black, yellow on the sides of the first and second tergites. Venter shining.

TYPES.—Holotype, male, Nova Teutonia, Brazil, July 7, 1936 (Fritz Plaumann). Paratype, male, same place, Nov. 27, 1936.

XANTHANDRUS VERRALL

In the Journal of the Kansas Entomological Society (April, 1936), I published a key to the species from the Neotropical region. It is interesting to note two new species for this genus from South America and I am republishing the key to bring it up to date. *X.* (*Melanostoma*) *euceratum* Bigot, from Mexico, is not included.

TABLE OF SPECIES

1.—Face cinereous or whitish pollinose.....3.
Face golden or golden brown pollinose, the orbits narrowly whitish.....2.
2.—Abdomen extensively reddish, bands on third and fourth tergites not interrupted.....*cubana* Fluke.
Abdominal bands broken up into triangular spots.....*nitidulus*, n. sp.
3.—Antennae entirely black, abdomen with only one pair of yellow spots in female; male unknown.....*plaumanni*, n. sp.
Antennae partly yellow beneath the third segment.....4.
4.—Second abdominal tergite opaque on not more than the apical third on either side in the female, the second segment normally with reddish spots in female.5.

Second abdominal tergite opaque on more than the apical half across its entire width (except the lateral margins) and never with reddish areas; male unknown ..... *mexicanus* Curran.

5.—Second abdominal tergite of male with pair of large, triangular yellowish spots ..... *flavomaculatus* Shannon.

Second abdominal segment of male wholly black ..... *bucephalus* Wiedemann.

Xanthandrus flavomaculatus Shannon

Figure 7

SHANNON, 1927, Proc. U. S. Nat. Mus., LXX, p. 6.

The type specimen is a male. Facial pollen and pile almost white; wings hyaline, only lightly tinged with brown; spots on second tergite triangular, on third and fourth tergites nearly quadrate; genitalia large.

Xanthandrus nitidulus, new species

Figure 8

Related to *X. flavomaculatus* Shannon but differs in the golden pruinosity of the face and triangular spots of the abdomen. Length, 11 mm.

MALE.—Head black, the tubercle and a large area of the front shining; face golden pollinose and with yellowish pile which becomes black on the sides near the antennae. Orbital edges of the front silvery pollinose, the pile all black. There is a distinct transverse depression on the inflated front just above the antennal arc. Ocellar triangle black with black pile; occipital cilia black. Antennae brown, the segments yellowish basally and beneath; arista yellow, darker toward the tip.

Mesonotum and scutellum aeneous with shining brassy to bronze cast, pollinose on the sides in front of the suture, the pile all yellowish brown, tips of the hairs darker. Pleura golden pollinose.

Legs light brownish to reddish, the tarsi and hind tibiae darker; pile mostly brownish to black.

Wings dilutely brownish, especially the front halves; squamae yellowish brown, the edges and fringes brown; halteres yellow; plumule white.

Abdomen semi-shining black with three pairs of triangular basal yellow spots; those on the second tergite more oval; spots on the third and fourth tergites reach the sides only by their corners, those on the fourth larger, inner sides of the median pair parallel. Fifth tergite with indications of a pair of very small basal spots. Pile short and black, longer and yellowish on the sides basally. Venter shining. Genitalia black, the styles yellow.

FEMALE.—Very similar; the front shining blue-black, convex above the depression, pile all black, a pair of whitish triangular side dust spots in the depression. Mesonotum darker aeneous, the pile shorter. Abdominal maculation the same.

TYPES.—Holotype, male, Nova Teutonia, Brazil, July 17, 1936 (Fritz Plaumann); allotype, female, same place, July 18, 1936. Paratypes: 9 males, same data as holotype; 1 male same place, Aug. 20, 1936; and one female same place, Oct. 8, 1936.

All of these specimens are remarkably uniform in size and markings. They are decidedly larger than *flavomaculatus.*

Xanthandrus plaumanni, new species

Figure 9

A shining black species with one pair of yellow spots; frontal hair long and black, antennae black, squamae dull yellow with black edge and fringe. Length, 12.5 mm.

FEMALE.—Face and front shining black, with slight bluish cast in certain lights. Face lightly covered with whitish pollen and pile, the tubercle shining; frontal depression with a pair of small whitish pollinose spots widely separated, rest of front shining with long black pile. Outer edges of antennal pits reddish. Antennae large, entirely black, arista yellow basally, darker toward the tip. Occipital pile white below, black on upper third.

Thorax blue-black, shining, the mesonotum clothed with black pile, becoming pale anteriorly. Pleura lightly dusted with whitish pollen, the pile whitish. Scutellum shining with black pile, a few shorter white hairs intermixed near the apex; the ventral fringe white.

Legs shining black, basal half of the four front tibiae yellowish; pile mostly black, a few long white hairs at the bases of the femora. Wings slightly infuscated, especially across the middle, the stigma yellowish brown. Squamae pellucid, the edges and fringes dark brown; halteres yellow, plumule white.

Abdomen black, bluish in reflected lights; the disc of each segment semi-opaque, the edges shining. A pair of small isolated basal yellow spots on the third tergite, these spots reach the base of the segment and are convex posteriorly, becoming narrower laterally. The fourth tergite has a basal shining area suggesting obsolete yellow markings. Venter with a broad yellow band, one-fourth on the apex of the second sternite, three-fourths on the base of the third sternite. Pile of abdomen mostly black and depressed, white and more erect basally and along the sides. Fourth sternite, basally, and the fifth white pollinose.

TYPES.—Holotype, female, Nova Teutonia, Brazil, Oct. 10, 1936 (Fritz Plaumann). Paratypes: two females, same place, Nov. 21 and Dec. 8, 1936.

This species differs from *bucephalus* Wiedemann in the entirely black antennae, longer black hairs of the front, black hairs of the mesonotum, black fringe of squamae, absence of any markings on the second tergite (female). The male when found will probably be less dark and possess yellow markings on the fourth tergite.

Rhysops currani, new species

Figure 10

A dark species with triangular side spots on tergites three and four. First segment of antenna elongate, first and second (measured from above) sub-equal to the third; face smooth with only three very faint transverse depressions. Length, 9 mm.

MALE.—Face rusty pollinose; a broad median stripe which forks before reaching the antennae, a narrow band along the side of the face, the oral margin, the lower face, and the area surrounding the antennae, shining; cheeks lightly dusted with whitish pollen; pile of face sparse, pale, becoming black above, all black on the front. Face with a low tubercle. Frontal triangle shining, with a median suture, the orbital margins rusty pollinose, with a prominent black opaque spot in the upper orbital

corner. Ocellar triangle opaque black, the pile dark brown to black; the cilia short and blackish. Antennae yellowish brown, upper half of the third segment darker; first segment longer than the second but shorter than the third; antennal pits widely separated.

Thorax shining black, considerably dulled by rusty brown pollen, which takes the form of two faint median stripes on the anterior half of the mesonotum; pile all yellowish brown. Pleura lightly dusted with brownish pollen.

Legs yellow, apical half of the hind femora, the apical three segments of the middle and hind tarsi, all but the base of the metatarsus of the fore tarsi, the hind tibiae, and the coxae brown to black. The bases of the hind femora are particularly yellow and rather sharply defined in color; the four front femora are somewhat obscurely yellowish brown apically.

Wings luteous, stigma yellowish. Squamae with dark brown border and fringe; halteres yellow, plumule white.

Abdomen velvety black, the rolled-under sides, the first segment, and the genitalia shining; second segment longer than the third; with two pairs of triangular yellowish spots. The second tergite has an elongate narrow yellow streak on each side; spots on the third and fourth tergites located in the basal corners, the first pair reaching the apical half and the second the apical two-fifths. Venter shining.

FEMALE.—Front with a broad, inwardly narrowed, band of opaque black in front of the ocelli; a very narrow pollinose streak borders this band posteriorly; rest of front cinereous pollinose except the large shining spot above the antennae; the pollinose band is almost bisected by a streak of black. Mesonotal pile very short and all pale. The scutellum has two longer black hairs at the apex.

Abdominal spots smaller on the third and fourth tergites, and broadly separated from the sides. Second tergite with a more oval pair of yellow spots. Basal margin of the third sternite yellow.

TYPES.—Holotype, male, Nova Teutonia, Brazil, July 18, 1936 (Fritz Plaumann); allotype, female, same data. Paratypes: five males, same place, July 18 and Sept. 1, 1936; two females, same place, Sept. 1 and Oct. 20, 1936.

According to Dr. Curran,[1] this species belongs to *Rhysops*, because of the length of the antennae, the second segment being longer than wide. The transverse grooves of the face are very faint, otherwise the face has the general appearance of *R. rugosonasus* Williston, the genotype. Of the described species this comes the nearest to *Melanostoma catabomba* Williston but may be told from it by the color of the legs, velvety spot of the front, etc.

Melanostoma lineata, new species

Figure 11

Antennae short; abdomen with elongate linear yellow spots. Length, 7.5 to 9 mm.

MALE.—Face almost perpendicular with two faint transverse depressions, the tubercle elongate, broad and low; shining black, the sides white pollinose, heavier

[1] See American Museum Novitates No. 926.

next to the eyes; the pile pale, sparse. Cheeks shining, lightly whitish pollinose. Frontal triangle rough, but shining above the antennae, broadly cinereous pollinose along the eyes, more whitish next to the orbits, the pile black. Ocellar triangle black, with black pile; occipital pile fine, short and black; occiput narrow, even below; silvery pollinose below. Antennae yellowish, darker toward the end and above on the third segment; first segment only very little longer than the second which is wider than long; the third slightly less in length than the first two together; the whole only about half as long as the face.

Mesonotum shining aeneous with a slight bronze cast, with yellowish brown pile; two very faint anterior median pollinose striae; hairs of the scutellum longer, some of the apical ones black. Pleura lightly coated with brownish to rusty colored pollen, the pile yellowish.

Legs black; basal one-fourth of the hind femora, apical one-third to one-half of the four front femora, all of the four front tibiae, and basal third of the hind tibiae yellow; the basal segment or two of the tarsi yellowish to brownish. No peculiar hairs present on the legs.

Wings hyaline, slightly tinged with brown, the stigma yellow. Squamae white, halteres yellow.

Abdomen narrow with nearly parallel sides, mostly shining black, the disc of tergites two and three more opaque. Second and third tergites each with a pair of elongate yellow vittae, both start basally, the first pair reaching the apical third and the second the apical half of the segments.

FEMALE.—Quite similar to male. Front with a broad, very narrowly bisected, brownish pollinose crossband, occupying the frontal depression; between this band and the ocelli a somewhat narrow black opaque band. Yellow areas on antennae and legs more extensive than on the male. Wings hyaline, abdomen more shining and there are small elongate spots on the second tergite.

TYPES.—Holotype, male, Nova Teutonia, Brazil, Sept. 2, 1936 (Fritz Plaumann); allotype, female, same place, July 7, 1936. Paratypes: three males, same place, July 6, 7 and Sept. 1, 1936; two females, same place, Sept. 1 and 2, 1936.

This species should be readily recognized by the vittate spots on the abdomen; the flat, practically non-rugose face, and the short antennae. It resembles closest *Rhysops* (*M.*) *scitula* Williston but the coloring of the legs will readily distinguish it.

Salpingogaster liposeta, new species

Figures 12 and 13

Facial tubercle reddish brown; mesonotum with a single median cinereous vitta; basal two-thirds of the fore margin of the wing blackish and with a dark transverse spot near the middle. Length, 12 to 13 mm.

FEMALE.—Head yellow, lightly whitish pollinose; a broad dark red area runs from the upper oral margin across the tubercle, across the antennal pits up the front and to the ocelli, narrowing as it approaches the ocelli; this leaves the sides of the face and front yellow. Cheeks light red, a narrow darker streak from the eyes to the side of the oral opening. Ocellar triangle black; occiput covered with grayish pollen

and white pile. Pile of head everywhere very short and pale. Antennae reddish brown, arista brown.

Mesonotum rough, dark, with very short fine pile; on the sides from the humeri to the suture, yellow; with a broad median yellowish brown pollinose vitta. Scutellum yellow, the base narrowly brownish. Pleural and sternal sclerites reddish, finely and thinly white pollinose, the sternopleura and posterior two-thirds of the mesopleura yellow; non-pilose.

Legs reddish brown to black; apices of the femora and basal one-third to one-half of the tibiae yellow.

Wings brown in front of the spurious vein as far out as the apical third of the first basal cell, brown in the apex of first basal cell to near the anterior cross vein, tinged with brown posteriorly and basally; apex of wing, all of the second basal cell and all but the anterior half and apex of first basal cell, hyaline. Squamae yellowish, halteres yellow.

Abdomen semi-shining black, basal corners of tergites one, three, four, five and apical margins of three and four yellowish white. Abdomen suddenly widening at the beginning of the third segment. Venter shining black. Pile of abdomen very short, black on the black areas, pale on the basal segments and white spots.

TYPES.—Holotype female and two paratype females, Puerto Grande, Isla Puna, Ecuador (F. Campos, R. Santiago, A. Navarro).

This species runs to *bicolor* Sack in Curran's key ('Diptera of British Guiana'). It should be easily recognized by the wing coloration, thoracic vitta, abdominal markings, etc.

Quichuana pogonosa, new species

Figure 14

A dull black species closely related to *Q. sylvicola* Knab; the pile on the face, and the tuft on the mesopleura and notopleura brassy yellow, fore margin of the wings darkened. Length, 9 to 10 mm.

MALE.—Head black, the face, cheeks and occiput with brassy pile, a few long black hairs overhanging the eyes above and in the center of the frontal triangle; face gray pollinose, a median stripe over the tubercle, but not reaching the antennae, and a stripe on each side shining, devoid of pollen but covered with scattered pile. The side stripes are isolated. Cheeks in front shining, behind pollinose and continuing on to the occiput; upper half of occiput becoming free of pollen; frontal triangle and ocellar triangle shining. There is a shallow double arched depression on the frontal triangle just above the antennae. Face with a low broad tubercle. Antennae brownish to black, the first segment blacker than the third; third a little less than twice as long as wide (much shorter than in *sylvicola*); arista reddish yellow. Eyes thickly covered with cinereous pile.

Thorax and scutellum dull black, with two median faint pollinose stripes which fade out before reaching the scutellum; pile all yellowish to brassy, rather heavy, with a prominent tuft of brassy pile on the notopleura and upper part of mesopleura. On the inner side of each humerus a golden pollinose spot. Pile of post alar callosities longer and brassy. On the sides of the notum adjacent to the wings there are patches of short black bristly hairs.

Legs shining black, the knees and hind tarsi reddish; pile pale yellowish. Hind femora decidedly enlarged, the tibiae arcuated.

Wings hyaline except for a dark area along the fore margin in front of the spurious vein; the costal cell and area within the loop of the third vein hyaline. Bases of the squamae yellow, the apices dark brown, fringes light brown. Halteres light yellow.

Abdomen dull black with yellow pile, black only on the apices of second to fourth tergites. The tuft of brassy yellow pile on the first tergite thick and "moustache-shaped," easily seen with the naked eye.

FEMALE.—Similar to the male, the front shining black with very small side triangles of pollen. The side stripes of the face are connected with the shining front.

TYPES.—Holotype, male, Nova Teutonia, Brazil, Sept. 2, 1936 (Fritz Plaumann). Allotype, female, same place, Aug. 30, 1936 (Plaumann). Paratypes: two males, same place, Sept. 2 and Dec. 20, 1936; five females, same place, Oct. 10, 12, 14 and Dec. 8 and 20, 1936.

Habromyia chrysotaenia, new species

Figure 15

Related to *H.* (*Quichuana*) *barbiellinii* Ceresa but the principal markings of the thorax are vittate instead of transverse. Length, 9 to 13 mm., average about 12 mm.

MALE.—Head generally dark, the facial stripe black and shining; sides of the face light yellowish pollinose, almost golden in some specimens, the pile rather long and whitish; lower face shining black, the cheeks golden pollinose with similar tomentose pile becoming more golden on the upper occiput. Frontal triangle shining black, the sides yellowish pollinose, pile yellowish white, short; ocellar triangle black, pile black, yellowish pollinose in front of the anterior ocellus. Face concave below antennae, thence convex, the tubercle broad, low. Antennae black, third joint more brownish, becoming yellowish to orange below; arista yellow, tip black, much longer than the antennae.

Thorax dull black with two brownish to golden pollinose vittae, each vitta starts broadly on the inner edge of the humeri, arches inward, almost breaks at the suture then curves outward to connect with the golden tomentose hairs on the post-alar callosity. On each side is a prominent patch of golden tomentose hairs just posterior to the humeri, these patches connect with golden hairs along the posterior edge of the mesopleura, on to the sternopleura and a few on the pteropleura. There is also a faint pollinose stripe along the transverse suture which just reaches the median vitta, also a narrow band of tomentose hairs in front of the scutellum. Other pile of the thorax black, becoming yellow anteriorly. Scutellum dull black, the tip indefinitely translucent yellowish, pile black on disc, yellow at the tip.

Legs reddish to brownish, the first four segments of the front tarsi and the hind femora, except the under side, almost black; in some specimens all the femora and occasionally the tibiae are black; pile mostly all pale, a few fine and short black bristles underneath the middle and hind femora, longer on the inner side of hind femora.

Wings light brownish in front, paler apically, hyaline posteriorly, the entire area within the loop of the third vein hyaline. Squamae light brown, the fringes golded, halteres yellow.

Abdomen dull black with short black hairs, longer and yellowish on the sides, particularly toward the base, the fifth tergite and beyond light brown pollinose, venter with long whitish hairs. Second tergite with a pair of oblique yellowish pollinose bands which do not reach the posterior margin; in some specimens these bands loop outward and extend forward along the sides but become almost yellow to red bands on the sides. These markings can be described as V-shaped, the outer ends encroaching on the apical corners of the first tergite. Basal margins of the third and fourth tergites golden pollinose and briefly tomentose, more broadly so on the sides.

FEMALE.—Similar, but the hairs more golden, especially on the face, and the abdomen is more oval. Front pollinose along the sides, dull black in the middle, third segment of antennae almost reddish. Fifth tergite of abdomen dark brown pollinose.

TYPES.—Holotype, male, Nova Teutonia, Brazil, Sept. 2, 1936 (Fritz Plaumann). Allotype, female, same data. Paratypes: seven males and eleven females, same place, all collected between Aug. 30 to Oct. 17, 1936 (Fritz Plaumann).

This species should be readily recognized by the oblique V-shaped markings on the abdomen and the markings on the thorax.

Habromyia lipoflava, new species

A dark species with few conspicuous markings; face yellowish to reddish in ground color. Length, 11 to 12 mm.

MALE.—Face reddish, silvery pollinose, with a darkened median bare stripe, which is more reddish below the rather large tubercle; cheeks shining black, bare above, lightly gray pollinose below, oral margin shining black. Frontal triangle shining black, pollinose only along the orbits. Pile of the head entirely whitish, only the hairs on the ocellar triangle black. Occiput with yellow globular hairs mixed with the yellowish-white pile above, silvery pollinose below. Antennae brownish red, the arista yellowish, almost white at the tip, the basal half thickened.

Thorax opaque, grayish black, the pile black with a few yellowish hairs intermixed, becoming almost all yellow in front between the humeri. A very narrow band of short globular-like hairs extends along the posterior margins of the mesopleura across the notopleura and follows the transverse suture to one-third the way across the mesonotum; a similar narrow band in front of the scutellum. The sterna and pleura shining black with yellowish-white pile. The scutellum reddish, blacker at the base; the short pile black, the long pile yellowish to white.

Legs mostly shining black, the under sides of all the femora and the bases of the four front tibiae reddish. Pile mostly white, along the lower, inner and basal edge of the hind femora a patch of conspicuous bristle-like black hairs in addition to the usual apical patch. Hind femora greatly thickened.

Wings dilutely yellowish, the stigma only a little darker. Squamae yellow, the fringe light brown. Halteres and plumule yellow.

Abdomen shining black with a bluish cast; apices of the second and third tergites opaque; pile of the tergites short and black, longer and yellow along the sides and toward the base. Sternites with long yellowish pile. Genitalia globose. The apical incisure margins of tergites two, three, and four yellow.

FEMALE.—The globular-like yellow hairs are more numerous on the notopleura

and there are patches of the same kind of hairs at the basal corners of tergites two, three, and four. The legs are more reddish than in the male.

TYPES.—Holotype, male, Yura, Peru (accession 27465); allotype, female (in poor condition), same data. Paratypes: four males, same data.

The hyaline wings, reddish face and tomentose hairs of the thorax will readily distinguish this species from all others known from South America.